



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

calls this interpretation in question. For example, in *Festuca spadicea* these persistent sheaths are found in the soil, where protection from transpiration is of little importance. A more striking observation was made on *Festuca varia*, a species that grows in winter while the soil about its roots is still frozen. Thinking that there might be absorptive organs beneath the mantles, the author finds that downward-pointing hairs are present in this position in many of these grasses. Mostly from such circumstantial evidence, BROCKMANN-JEROSCH postulates that these hairs are water-absorptive organs. Such an observation needs experimental corroboration, as the author frankly recognizes.—H. C. COWLES.

Soil studies.—E. E. FREE¹³ of the U.S. Bureau of Soils has brought together the essential features of our knowledge of soil physics in admirable form for use by physiologists and ecologists. The material is treated under the following heads: the physical condition of soils, the movements of soil water, soil water and the plant, the physical constants of soils, and soil temperature.

FREE has also published an elaborate paper on soil movement by wind.¹⁴ While this treatise will be of value in the first instance to physiographers, it will also be of great interest to all ecologists who are interested in the vegetation of such wind deposits as sand dunes or loess. Among the topics treated are the mechanics of wind translocation, drifting sand and sand dunes, dust storms and dust falls, atmospheric dust, geologic formations of eolian origin, and volcanic dust as soil material. At the close is a remarkably complete bibliographical index of eolian geology; in the compilation of this index FREE was aided by S. C. STUNTZ.—H. C. COWLES.

Defoliation and wood structure.—In recent years many trees of the European larch in the English Lake District have been repeatedly defoliated by the large larch sawfly. Some of the trees have been studied by HARPER¹⁵ to determine the influence on wood structure. Such defoliation means starvation to a greater or less degree, and starvation affects both the amount of growth and the structure of the wood. In the lower parts of the tree, where the rings ordinarily are narrower than they are above, growth may cease altogether; higher up, where there is more growth, the rings may not completely encircle the tree. Even before this effect is seen, there is a reduction in the wall thickening of the autumn wood. This situation is related to an actual lack in the foods necessary to build up these tissues to the usual amount.—H. C. COWLES.

¹³ FREE, E. E., Studies in soil physics. *Plant World* 14:29-39, 59-66, 110-119, 164-176, 186-190. 1911.

¹⁴ FREE, E. E., The movement of soil material by the wind. U.S. Bureau of Soils, Bull. 68. pp. 272. pls. 5. 1911.

¹⁵ HARPER, A. G., Defoliation: its effects upon the growth and structure of the wood of *Larix*. *Ann. Botany* 27:621-642. pls. 2. figs. 2. 1913.